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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 5

Complete If Known

Application Number	09/469,200
Filing Date	12/21/1999
First Named Inventor	Paul Weigel, et al.
Group Art Unit	1653
Examiner Name	G. Bugaisky
Attorney Docket Number	35541.011

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U.S. PATENT DOCUMENTS

Examiner Initials ¹	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
JLB	1	RE37336		Weigel, et al.	08/21/2001	435/101
	2	4224179		Schneider	09/23/1980	264/14.6
	3	4235871		Papahadjopoulos, et al.	11/25/1980	424/1450
	4	4511478		Nowinski, et al.	04/16/1985	210/691
	5	4517295		Bracke, et al.	05/14/1985	435/1101
	6	4515692	4615697	Robinson	10/07/1988	424/1428
	7	4708861		Popescu, et al.	11/24/1987	424/11.21
	8	4780414		Nimrod, et al.	10/25/1988	435/1101
	9	4782046		Brown, et al.	11/01/1988	514/54
	10	4784990		Nimrod, et al.	11/15/1988	514/54
	11	4801539		Akasaka, et al.	01/31/1989	435/1101
	12	4822867		Erhan	04/18/1989	527/1200
	13	4983392		Robinson	01/08/1991	424/1427
	14	5015577		Weigel, et al.	05/14/1991	435/1101
	15	5023175		Hosoya, et al.	05/11/1991	435/1101
	16	5071751		Morita, et al.	10/12/1991	435/1101
	17	5171689		Kawaguri, et al.	12/15/1992	204/453.1
	18	5217743		Farah	06/08/1993	427/2.3
	19	5337747		Neffel	08/16/1994	606/347
	20	5472704		Santus, et al.	12/05/1995	424/1435

FOREIGN PATENT DOCUMENTS

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		Office ³	Number ⁴				
JLB	A		0036776 EPO	Kleid, et al.	05/11/1988		
	B		0144019 EPO	Brown, et al.	06/13/1990		
	C		0195303 EPO	Grandt, et al.	11/08/1989		
	D		0244757 EPO	Hosoya, et al.	11/09/1994		
	E		0288578 EPO	Miyamoto, et al.	07/07/1993		
	F		91/03559 WO	Weigel, et al.	03/21/1991		
	G		94/00463 WO	Prehm, et al.	01/06/1994		
	H		95/24497 WO	Lensing, et al.	09/14/1995		
	I		95/33067 WO	Stohl, Sten	12/07/1995		
	J		97/20081 WO	Wong, et al.	08/05/1997		

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Attorney Docket Number	35541.011

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		Office3	Number4			
<i>[Handwritten mark]</i>	K		8-38336 JP		1993 1997	
	L		4-124854 JP		1992	
	M		4-134854 JP		1992	
	N		61-257169 JP		1986	
	O		4-80202		03/13/1992	
	P		63094988 JP	<i>(Abs. only) English</i>	1988	
	Q		62032893 JP	<i>" "</i>	1987	
<i>[Handwritten mark]</i>	R		4-158796 JP	<i>il "</i>	1992	
	S		2249315 GB	Satch, et al.	05/06/1992	

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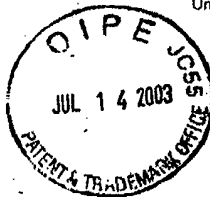
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Sheet 3 of 5

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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
AA		"THE PRODUCTION OF CAPSULES, HYALURONIC ACID AND HYALURONIDASE BY GROUP A AND GROUP C STREPTOCOCCI", MacLennan, J. Gen. Microbiol., 14:134-142 (1956).	
BB		"THE ISOLATION AND CHARACTERIZATION OF A HYALURONIDASE PRODUCED BY A CAPSULATED STRAIN OF GROUP C STREPTOCOCCUS", MacLennan, J. Gen. Microbiol., 14:143-152 (1956).	
CC		"THE BIOSYNTHESIS OF HYALURONIC ACID BY GROUP A STREPTOCOCCUS", Markovitz et al., J. Biol. Chem., 234 (9):2343-2350 (1959).	
DD		"THE BIOSYNTHESIS OF HYALURONIC ACID BY STREPTOCOCCUS", Stoolmiller, et al., Journal of Biological Chemistry, Vol. 244, No. 2, pp. 236-246 (1969).	
EE		"BIOSYNTHESIS OF HYALURONIC ACID BY STREPTOCOCCUS", Sugahara et al., J. Biol. Chem., 254:6252-6261 (1979).	
FF		"MODERN GENETICS," Ayala, et al., Benjamin/Cummings Publishing Col., Menlo Park CA, p. 45 (1980).	
GG		"STRAINS OF ESCHERICHIA COLI CARRYING THE STRUCTURAL GENE FOR HISTIDYL-tRNA SYNTHETASE ON A HIGH COPY-NUMBER PLASMID," Eisenbels, et al., Mol. Gen. Genet. 183:115-122 (1981).	
HH		"SYNTHESIS OF HYALURONATE IN DIFFERENTIATED TERATOCARCINOMA CELLS," Prehm, et al., J. Biochem, Vol. 211, pp. 181-189 (1983).	
II		"STREPTOCOCCAL HYALURONIC ACID: PROPOSED MECHANISMS OF DEGRADATION AND LOSS OF SYNTHESIS DURING STATIONARY PHASE", Van de Rijn, J. Bacteriol., 156(3):1059-1065 (1983).	
JJ		"SOLUBILIZATION OF HYALURONIC ACID SYNTHETIC ACTIVITY FROM STREPTOCOCCI AND ITS ACTIVATION WITH PHOSPHOLIPIDS", Triscott et al., J. Biol. Chem., 261(13):6004-6009 (1986).	
KK		"ISOLATION OF STREPTOCOCCAL HYALURONATE SYNTHASE", Prehm et al., Biochem. J., 235:887-889 (1986).	

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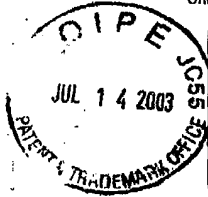
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Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/469,200
		Filing Date	12/21/1999
		First Named Inventor	Paul Weigel, et al.
		Group Art Unit	1653
		Examiner Name	G. Bugaisky
Sheet 4	of 5	Attorney Docket Number	35541.011

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9/15	LL	"ISOLATION, STRUCTURE AND EXPRESSION OF MAMMALIAN GENES FOR HISTIDYL-tRNA SYNTHETASE," Tsui, et al., Nucleic Acids Research, Vol. 15, No. 8, pp. 3349-3367, (1987).	
	MM	"SHUTTLE VECTORS CONTAINING A MULTIPLE CLONING SITE AND A LACZA GENE FOR CONJUGAL TRANSFER OF DNA FROM ESCHERICHIA COLI TO GRAM-POSITIVE BACTERIA," Trieu-Cout, et al., Gene, Vol. 102, pp. 99-104, (1991).	
	NN	"ANALYSIS OF THE STREPTOCOCCAL HYALURONIC ACID SYNTHASE COMPLEX USING THE PHOTOAFFINITY PROBE 5-AZIDO-UDP-GLUCURONIC ACID," Van de Rijn, et al., J. Biol. Chem., Vol. 267, No. 34, pp. 24302-24306, (1992).	
	OO	"MOLECULAR CHARACTERIZATION OF A LOCUS REQUIRED FOR HYALURONIC ACID CAPSULE PRODUCTION IN GROUP A STREPTOCOCCI," Dougherty, et al., J. Exp. Med., Vol. 175, pp. 1291-1299, (1992).	
	PP	"HYALURONAN," Laurent, et al., FASEB Journal, Vol. 6, pp. 2397-2404, (1992).	
	QQ	"ISOLATION OF A STREPTOCOCCUS PYOGENES GENE LOCUS THAT DIRECTS HYALURONAN BIOSYNTHESIS IN ACAPSULAR MUTANTS AND IN HETEROLOGOUS BACTERIA," DeAngelis, et al., J. Biol. Chem., Vol. 268, No. 20, pp. 14568-14571, (1993).	
	RR	"HYALURONATE SYNTHASE: CLONING AND SEQUENCING OF THE GENE FROM STREPTOCOCCUS SP.," Lansing, et al., J. Biochem., Vol. 289, pp. 179-184, (1993).	
	SS	"MOLECULAR CHARACTERIZATION OF HASB FROM AN OPERON REQUIRED FOR HYALURONIC ACID SYNTHESIS IN GROUP A STREPTOCOCCI," Dougherty, et al., J. Biol. Chem., Vol. 268, No. 10, pp. 7118-7124, (1993).	
	TT	"MOLECULAR CLONING, IDENTIFICATION, AND SEQUENCE OF THE HYALURONAN SYNTHASE GENE FROM GROUP A STREPTOCOCCUS PYOGENES," DeAngelis, et al., J. Biol. Chem., Vol. 268, No. 26, pp. 19181-19184, (1993).	
	UU	"MOLECULAR CHARACTERIZATION OF HASA FROM AN OPERON REQUIRED FOR HYALURONIC ACID SYNTHESIS IN GROUP A STREPTOCOCCI," Dougherty, et al., J. Biol. Chem., Vol. 269, No. 1, pp. 169-175, (1994).	
	VV	"THE STREPTOCOCCUS PYOGENES HYALURONAN SYNTHASE: SEQUENCE COMPARISON AND CONSERVATION AMONG VARIOUS GROUP A STRAINS," DeAngelis, et al., Biochem. and Biophys. Res. Comm., Vol. 199, No. 1, pp. 1-10, (1994).	

Examiner Signature	<i>[Signature]</i>	Date Considered	9/15/03
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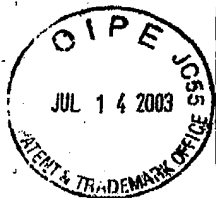
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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JS	WW	"MOLECULAR FINGERPRINTING OF PASTEURELLA MULTOCIDA ASSOCIATED WITH PROGRESSIVE ATROPHIC RHINITIS IN SWINE HERDS". Gardner et al. Database Medline on Dialog, US Natl. Library of Medicine (Bethesda, MD, USA) No. 05161494 Abstract, J. Vet. Diagn. Invest. Oct. 1994, Vol. 6, No. 4, pages 120-124, entire document .	pp 442-449
	XX	"THE ELUCIDATION OF NOVEL CAPSULAR GENOTYPES OF HAEMOPHILUS INFLUENZAE TYPE B WITH THE POLYMERASE CHAIN REACTION. Leaves et al. J. Medical Microbiology. 1995, Vol. 43, pages 120-124, entire document .	
	YY	"HOMOLOGS OF THE XENOPUS DEVELOPMENTAL GENE DG42 ARE PRESENT IN ZEBRAFISH AND MOUSE AND ARE INVOLVED IN THE SYNTHESIS OF NOD-LIKE CHITIN OLIGOSACCHARIDES DURING EARLY EMBRYOGENESIS", Semino et al., Proc. Natl Acad. Sci. USA, 93:4548-4553 (1996).	
	ZZ	"ENZYMOLOGICAL CHARACTERIZATION OF THE PASTEURELLA MULTOCIDA HYALURONIC ACID SYNTHASE", DeAngelis, Biochemistry, 35 (30): 9768-9771 (1996).	
	aa	"CONSTRUCTION AND CHARACTERIZATION OF A POTENTIAL LIVE ORAL CARRIER-BASED VACCINE AGAINST VIBRIO CHOLERAEE". Favre et al. Infection and Immunity. September 1996. Vol. 64, No. 9 pages 3565-3570, entire document .	
	bb	"MOLECULAR CLONING, EXPRESSION, AND CHARACTERIZATION OF THE AUTHENTIC HYALURONAN SYNTHASE FROM GROUP C STREPTOCOCCUS EQUISIMILIS", Kumari and Weigel, J. Biol. Chem., 272(51): 32539-32546 (1997).	
	cc	"HYALURONAN SYNTHASES", Weigel et al., J. Biol. Chem., 272 (22): 13997-14000 (1997).	
	dd	"IDENTIFICATION AND MOLECULAR CLONING OF A UNIQUE HYALURONAN SYNTHASE FROM PASTEURELLA MULTOCIDA", DeAngelis et al., J. Biol. Chem., 273(14): 8454-8458 (1998).	
	ee	"THE CAPSULE BIOSYNTHETIC LOCUS OF PASTEURELLA MULTOCIDA A:1. Chung, et al. FEMS Microbiol. Lett. 15 September 1998, Vol. 166, No. 2, pages 289-296, entire document .	

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